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Social acceptance in inclusive classrooms: the role of teacher attitudes toward inclusion and classroom management

Garrote, Ariana ; Felder, Franziska ; Krähenmann, Helena ; Schnepel, Susanne ; Sermier Dessemontet, Rachel ; Moser Opitz, Elisabeth

Abstract: Social acceptance is vital to students' development. Being rejected by classmates can result in negative socio-emotional and academic outcomes. Finding relevant factors to be able to effectively support student social acceptance is especially challenging in inclusive classrooms because of the high heterogeneity of the student group. There is evidence that social acceptance is determined by the social behavior of students. In addition, current research suggests that affect-motivation dispositions, such as teacher attitudes, are related to teaching practices, which in turn are associated with student outcomes. This longitudinal study examines, on an individual level, the relationship between social behavior and the social acceptance of students. On a classroom level, the extent to which a teacher's attitudes toward the inclusion of students with special educational needs affects their classroom management (i.e., implementation of clear rules and successful time management) is analyzed. In addition, the effect of teacher attitudes toward inclusion and classroom management on social acceptance in the classroom is investigated. The social acceptance of a sample of 580 students in 34 inclusive classrooms was assessed at the beginning and the end of the school year. In addition, student social behavior was rated by peers at the beginning of the school year. Teachers ($n = 34$) were asked about their attitudes toward inclusion at the beginning of the school year. One mathematics lesson in each classroom was videotaped to assess the teachers' classroom management practices. Multilevel structural equation models revealed a positive relationship between student social behavior and their social acceptance in the peer group. Contrary to expectations, teachers' attitudes toward inclusion did not predict their classroom management practices (i.e., implementation of clear rules and successful time management). As hypothesized, teachers' classroom management predicted the level of social acceptance in the classroom, whereas teachers' attitudes toward the inclusion of students with special educational needs did not. The study results are discussed in light of previous findings and implications for teacher education are described.

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Social Acceptance in Inclusive Classrooms: The Role of Teacher Attitudes Toward Inclusion and Classroom Management

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Social acceptance is vital to students' development. Being rejected by classmates can result in negative socio-emotional and academic outcomes. Finding relevant factors to be able to effectively support student social acceptance is especially challenging in inclusive classrooms because of the high heterogeneity of the student group. There is evidence that social acceptance is determined by the social behavior of students. In addition, current research suggests that affect-motivation dispositions, such as teacher attitudes, are related to teaching practices, which in turn are associated with student outcomes. This longitudinal study examines, on an individual level, the relationship between social behavior and the social acceptance of students. On a classroom level, the extent to which a teacher's attitudes toward the inclusion of students with special educational needs affects their classroom management (i.e., implementation of clear rules and successful time management) is analyzed. In addition, the effect of teacher attitudes toward inclusion and classroom management on social acceptance in the classroom is investigated. The social acceptance of a sample of 580 students in 34 inclusive classrooms was assessed at the beginning and the end of the school year. In addition, student social behavior was rated by peers at the beginning of the school year. Teachers ($n = 34$) were asked about their attitudes toward inclusion at the beginning of the school year. One mathematics lesson in each classroom was videotaped to assess the teachers' classroom management practices. Multilevel structural equation models revealed a positive relationship between student social behavior and their social acceptance in the peer group. Contrary to expectations, teachers' attitudes toward inclusion did not predict their classroom management practices (i.e., implementation of clear rules and successful time management). As hypothesized, teachers' classroom management predicted the level of social acceptance in the classroom, whereas teachers' attitudes toward the inclusion of students with special educational needs did not. The study results are discussed in light of previous findings and implications for teacher education are described.

Keywords: classroom management, teacher attitudes, social acceptance, primary school, special educational needs, inclusive classrooms

INTRODUCTION

Providing an optimal learning environment for the academic and socio-emotional development of students is a major task for teachers. There is a large body of evidence focusing on the effect of the teacher on academic development, such as student learning processes and cognitive outcomes (e.g., Hattie, 2009). In recent years, researchers have also examined the extent to which teaching practices contribute to the social experiences of students within their peer group and hence to their socio-emotional development (e.g., Farmer et al., 2011; Juvonen et al., 2019). More specifically, Farmer et al. (2011) introduced the concept of the “invisible hand” into the research discourse. This refers to the potential teachers have to influence peer dynamics and student social behavior in classrooms. Teachers can intentionally improve student social acceptance by implementing peer assisted learning strategies (e.g., Fuchs et al., 2002), or by changing seating arrangements in their classrooms (e.g., Van Den Berg et al., 2012). Teachers also unintentionally affect the social dynamics of the classroom by interacting with students and implementing their teaching routines (Farmer et al., 2011). For example, how teachers give feedback does not only have an impact on students' learning processes (e.g., Hattie, 2009), but also affects their social acceptance (e.g., Hendrickx et al., 2017; Wullschlegel et al., 2020). However, most empirical studies on the impact of teachers on student social outcomes have been carried out in regular classrooms. Little is known about the extent to which teachers influence student social acceptance in inclusive classrooms. In these classrooms, it is particularly challenging for teachers to support student social acceptance because they are highly heterogeneous in terms of student characteristics and broad range of educational needs (i.e., typically developing students, special educational needs students, and second language learners). Therefore, it could be that the impact of teacher related variables on student social outcomes differs from that in regular classrooms. This study contributes to the understanding of the role of teachers in student social acceptance in inclusive classrooms.

Developmental studies have shown that supporting student social acceptance in the peer group is vital to their social and academic development, as negative outcomes can be prevented. Students who are rejected by their classmates show higher rates of stress and school avoidance and display lower academic engagement (Ladd et al., 2008; Peters et al., 2011). In the longer term, the lack of peer acceptance can cause behavioral problems (Sturaro et al., 2011) and result in students dropping out of school (Ollendick et al., 1992). Research has shown that some students are more vulnerable and are more likely to experience social rejection and negative academic outcomes. In inclusive classrooms, students with special educational needs are sometimes at greater risk of being less accepted by their peers than their classmates without special educational needs (Koster et al., 2010; Pijl and Frostad, 2010; Grütter et al., 2015). Students showing a lack of socially competent behavior are also less likely to be accepted by their peers (de Monchy et al., 2004; Mand, 2007; Bacete et al., 2017). For instance, Bacete et al. (2017) asked first and second grade students about their reasons for

rejecting a peer. Most students associated the rejection of peers with behaviors that threatened social expectations and norms (e.g., pushing around, bossing about, interrupting, hitting). This indicates that student social behavior determines their level of social acceptance within the peer group. On a classroom level, however, expected and “normal” social behavior is dependent on the classroom norm. This means that a student's social acceptance is also determined by the acceptance of their behavior by the group (Chang, 2004; Hitti et al., 2011). Whether behaviors such as aggression and prosocial actions are perceived as “normal” in a classroom is, in turn, dependent on teacher practices (Mikami et al., 2012). Therefore, both peer group dynamics and the teachers' role in creating it are relevant when analyzing how to foster the social acceptance of all students (Farmer et al., 2019).

Currently, the impact of teachers on students is conceptualized with models of teacher competence. Blömeke et al. (2015) and Krauss et al. (2020) describe the process of teacher influence on the students as dispositions (cognitive and affect-motivation) of the teacher that affect his or her teaching practices, which in turn have an impact on the students. These models and the associated studies mostly focus on cognitive and non-cognitive student outcomes related to mathematical learning (e.g., mathematical achievement, motivation). However, the models are also useful as heuristics for social outcomes like the social acceptance of students. Krauss et al. (2020) distinguish the affect-motivation dispositions self-regulation, motivational orientations as well as beliefs, values, and goals, to which attitudes can be included. These dispositions affect teaching practices in the dimensions of classroom management, student support, and cognitive activation. Focusing on inclusive classrooms, the affect-motivation variable “teacher attitude toward inclusive education” and its relationship to other teacher related variables has been analyzed in several studies.

Current research shows a relationship between attitudes toward inclusion—or attitudes toward students with disabilities—and inclusive teaching practices. Avramidis et al. (2019) found that teachers' attitudes toward inclusion and their self-efficacy for inclusive practices predicted their willingness to implement a peer-tutoring program. Further, research by Wilson et al. (2019) indicated that teachers with more positive attitudes toward children with disabilities had higher self-efficacy and a higher inclination to use inclusive teaching practices. According to Hellmich et al. (2019), primary school teachers' everyday practices in heterogeneous classrooms were related to their intentions regarding the implementation of inclusive education and to their attitudes toward inclusive education. Moreover, a longitudinal study from Bosse et al. (2016) showed that teachers with more positive attitudes toward inclusion were less anxious. Less anxiety might in turn positively affect the teaching quality. Finally, Monsen et al. (2014) showed that teachers with highly positive attitudes toward inclusion made a greater effort to adapt their learning, social, and emotional classroom environments to reflect an atmosphere suitable for included students with special educational needs. To conclude, many studies suggest a relationship between teacher attitudes toward inclusion and teaching practices in inclusive classrooms. However, this relationship has not been extensively investigated

in longitudinal studies. In addition, teaching practices were assessed with self-reported data from the teachers. Studies with concrete behavior observations are lacking.

Classroom management is a core component of effective teaching practice (Hattie, 2009) and researchers have highlighted its particular importance in inclusive classrooms (Jordan and McGhie-Richmond, 2014; Farmer et al., 2019). Farmer et al. (2019) point out that classroom management is designed to foster student development and the maintenance of new competencies. In an observational study, Jordan and McGhie-Richmond (2014) identified classroom management as an effective teaching practice that correlated with the amount of instructional time. Helmke (2014) emphasized three factors for effective classroom management: (1) clear rules and the early establishment and consistent realization of social and academic norms, (2) successful time management which facilitates the smooth transition from one activity to the next and prevents tardiness and unnecessary waiting, and (3) the effective prevention and handling of classroom disruptions. Jordan and McGhie-Richmond (2014) report, focusing on inclusive classrooms, that well-established classroom routines for beginning and ending a lesson, handing out and collecting materials and transitions between tasks, expecting students to help each other before asking for help from the teacher, and taking some responsibility for managing their behavior and engagement in learning activities, are crucial.

Most of the research on the effects of classroom management has focused on the academic progress of students as an outcome variable. Only in recent years has there been an increasing interest in investigating the impact of teacher classroom management practices on student social outcomes (e.g., Farmer et al., 2019). As a classroom leader, the teacher plays a crucial role in the management of behavior (e.g., with the implementation of rules) as well as the acceptance of students' behavior (Pianta and Hamre, 2009; Mikami et al., 2010; Farmer et al., 2011). Karakaya and Tufan (2018) examined the relationship between teachers' classroom management and students' social behavior in a sample with preschoolers aged 4–7. No relationship between these variables could be found. However, data were collected using teacher questionnaires and concrete teaching practices were not examined. This might have affected the results. Based on research on the relationship between teachers' classroom practices and the occurrence of disruptive behavior (e.g., Stronge et al., 2011) it can be hypothesized, that a high level of effective classroom management practices, like the implementation of effective rules, can prevent disruptive behavior (Kostewicz et al., 2008). This in turn can positively affect the social acceptance of students who are at risk of being rejected because of their disruptive behavior. A meta-analysis of Korpershoek et al. (2016) showed that classroom management facilitates both academic and socio-emotional learning. In their research summary, Soodak and McCarthy (2006) stress that certain teaching practices (i.e., using hands-on activities, peer tutoring) are associated with social acceptance in the peer group. However, this positive effect needs to be supported by more evidence, as studies on the impact of classroom management on social acceptance are very scarce.

In conclusion, students' social acceptance is determined by individual characteristics such as student social behavior. In addition, some evidence is available indicating that a teacher's attitude toward inclusive education—as an affect-motivation disposition—affects their teaching practices. However, the findings are based on self-reported teacher behavior. Studies that investigate the relationship between attitudes toward inclusion and the concrete teaching practices in class are lacking. Finally, there is a growing body of research suggesting that social acceptance in the peer group is influenced by how teachers manage the classroom. Yet, there are not many empirical studies that have examined the extent to which classroom management affects students' social acceptance in inclusive classrooms.

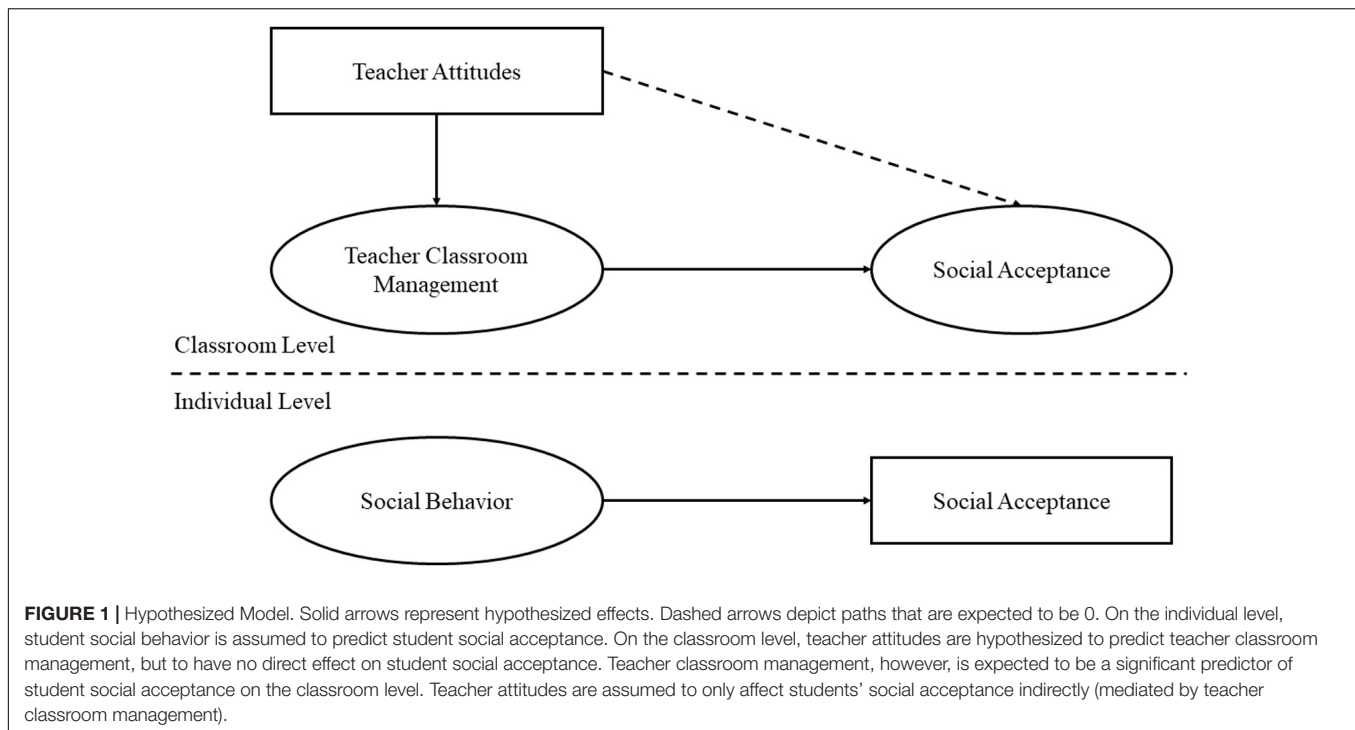
In light of the current state of research, this study will answer the following research questions on an individual and on a classroom level (see **Figure 1**).

- (1) Does student social behavior predict student social acceptance in the peer group (individual level)? In accordance to previous findings (e.g., de Monchy et al., 2004; Mand, 2007; Bacete et al., 2017), it is hypothesized that students with higher levels of social behavior are more likely accepted by their peers.
- (2) Do teacher attitudes toward inclusion predict classroom management (classroom level)? Based on previous study results (e.g., Hellmich et al., 2019; Wilson et al., 2019), a significant relationship between attitudes toward inclusion and classroom management is assumed.
- (3) Does effective classroom management predict student social acceptance in the peer group (classroom level)? According to the research supporting the impact of classroom management on student social experiences (e.g., Farmer et al., 2019), a positive relationship is assumed, which suggests that more effective classroom management leads to a higher level of social acceptance in the classroom.
- (4) Do teacher attitudes toward inclusion predict student social acceptance in the peer group (classroom level)? Considering the expected relationship of affect-motivation dispositions and teaching practices (Blömeke et al., 2015; Krauss et al., 2020), no direct relationship between attitudes toward inclusion and social acceptance is expected. Only an indirect effect via classroom management is assumed.

MATERIALS AND METHODS

Participants and Procedure

The sample of the present study consists of 34 inclusive classes from grade 1 to grade 3 (6-to-9-year old students; $n = 580$) from 9 cantons in two linguistic regions of Switzerland. Eight classes were combination classes (i.e., grade 1 to 3 or grades 1 and 2). In Switzerland, the 26 cantons are individually responsible for education and each have their own regulations. All cantons embrace inclusive education, but implementation differs. In some cantons all students with learning disabilities and 50% of the students with intellectual disabilities attend mainstream classes while in other cantons, the level of inclusion is much



lower. Invitation letters were sent to several schools via school authorities. Teachers decided voluntarily whether or not they wished to participate ($n = 34$). The parents gave written consent for the participation of their children in the study. Classes were included in the study if they included at least one student who had been diagnosed, prior to the study, with an intellectual disability or a severe learning disability (cut off criteria $IQ < 75$) by a school psychologist ($n = 43$). Students with milder learning disabilities and behavioral problems were also enrolled in these classes. However, according to the common practice in Switzerland these students were not officially diagnosed as having special educational needs. Due to the small number of students diagnosed with an intellectual disability or severe learning disability in each class, this variable (with special educational needs vs. without special educational needs) could not be included in the study analyses. Nevertheless, these students were part of the study sample.

In the study sample, a special education teacher was present in the classes, with a range of 3–17 h per week ($M = 9.1$, $SD = 3.73$). In 17 classrooms, the special education teacher was present in the classrooms in all of his or her lessons of support, and the general education and the special education teacher were both present in the classroom. In 12 classes, a mixed setting was chosen (in-class support and one-to-one support outside the classroom, or in-class-support combined with small group support of students with and without an intellectual disability). In the remaining 5 classes, the support of the special education teacher was provided exclusively for the student(s) with an intellectual disability in a resource room. This so-called “nested-instruction” structure where there are occasionally two teachers present in the classroom, makes it

challenging to examine the influence of the teachers (Jones and Brownell, 2014; Pfister et al., 2015). Strategies that were implemented to deal with this challenge will be described in the measures section.

The study was conducted over one school year. Student social behavior and social acceptance at t_1 were assessed at the beginning of the school year, social acceptance at t_2 at the end. The teacher questionnaire on attitudes toward inclusion was administered at the beginning of the school year. Teacher classroom management in class was observed 3–4 months after the beginning of the school year by videotaping one mathematics lesson.

Measures

Teacher Attitudes Toward Inclusion

Teacher attitudes toward inclusion were assessed using the Opinions Relative to the Integration of Students with Disabilities questionnaire (ORI; $n = 34$, Min = 73, Max = 130, $M = 102.21$, $SD = 13.1$, 25 items, Cronbach's alpha = 0.85). The questionnaire was translated and the terminology and the labels of the factors were adapted (i.e., integration, disability) to make it more suitable in the contemporary Swiss context (Ewing et al., 2018) and the specific setting of regular classes attended by students with an intellectual disability. The ORI questionnaire consists of four factors (Antonak and Larrivee, 1995). Factor I is comprised of eight items (Cronbach's alpha = 0.85) on the benefits of inclusive education (e.g., “The challenge of being in a regular classroom promotes the academic growth of students with ID.”). Factor II includes 10 items (Cronbach's alpha = 0.70) on the behavior of students with an intellectual

disability and classroom management (e.g., “It is not more difficult to maintain order in a regular classroom that contains a student with an intellectual disability than in one that does not contain students with an intellectual disability.”). Factor III includes three items (Cronbach’s $\alpha = 0.69$) on the perceived ability to teach students with an intellectual disability (e.g., “Regular classroom teachers have the ability necessary to work with students with an intellectual disability.”). Factor IV comprises four items (Cronbach’s $\alpha = 0.51$) on the topic “special versus inclusive education” (e.g., “Students with an intellectual disability can best be served in regular classrooms”). In the present study, the analyses are carried out both with the total score of the ORI as a manifest variable and, separately, with the scores of factors I (benefits of inclusion), II (behavior management), and III (ability to teach) as manifest variables. Factor IV is excluded because of its low reliability in the study sample.

Teacher Classroom Management

Video data were used to assess classroom management. Between November and December, approximately 3–4 months after the start of the school year, one mathematics lesson per class (duration $M = 48.88$ min, $SD = 10.33$) was videotaped using two cameras (3329 min in total). Teachers were given two fixed conditions for the video-recorded lesson: (a) the content had to be arithmetic and (b) the study aimed to record *business as usual*. That meant, for example, that both the general education teacher and the special education teacher had to be teaching during the lesson. As the general education teacher lead the classroom activities during most of the lesson, only his or her classroom management practices were considered for further analyses.

After the video session, the teachers were interviewed to determine if the recorded lesson had been typical for a mathematics lesson and the setting of the collaboration. Based on the interviews, the video-recorded lessons were assessed to be “mostly typical” or “rather typical.” Only video data from typical situations were included in the analyses ($n = 33$). Two items were defined and rated by indicators: time management and consistent implementation of clear rules. The ratings describe an overall evaluation of a whole lesson unit that is based on the intensity or degree of the shown behavior (Rakoczy and Pauli, 2006) using a Likert-like scale, ranging from 4 = full compliance with the ideal performance to 1 = no compliance with the ideal performance. Indicators for time management were, for instance, “the teacher uses the time for instructional and content-based activities” or “the transition of one lesson phase to the next proceeds smoothly.” Indicators for the item implementation of rules were, for instance, “the teacher ensures that the students obey the rules” or “the teacher draws the attention of the students to rule violations.” Each video was rated independently by two trained rater. Interrater reliability g_{relativ} (Clausen et al., 2003) was 0.88 for time management and 0.86 for implementation of rules. G-Coefficients are interpreted according to the same criteria as reliability coefficients (ibid.), therefore the interrater reliability was good. Each class had a score for time management ($M = 2.45$,

$SD = 0.75$) and a score for the implementation of rules ($M = 3.12$, $SD = 0.8$).

Student Social Behavior

To assess the social behavior of students, their peers were asked two questions about cooperative and prosocial behavior ($n = 579$, Cronbach’s $\alpha = 0.84$). Participants rated four randomly selected classmates on a five-point-scale with smileys (1 = ☹ = “I do not agree at all” to 5 = ☺ = “I totally agree”) with respect to how well they could work with them and how helpful they were. For each student, an average cooperative behavior score ($n = 579$, $M = 3.71$, $SD = 0.84$) and an average prosocial behavior score ($n = 579$, $M = 3.62$, $SD = 0.86$) at t_1 was calculated.

Student Social Acceptance

The social acceptance of students was determined by asking their peers at the beginning (t_1) and end of the school year (t_2) questions about playing together. The sociometric instrument was developed based on the recommendations in Hymel et al. (2004). Participants rated how much they liked to play with every single classmate on a five-point-scale with smileys (1 = ☹ = “I do not like to play with X at all” to 5 = ☺ = “I like to play with X a lot”). For each student, an average acceptance score was calculated with the ratings received from all classmates at t_1 ($n = 580$, $M = 3.49$, $SD = 0.61$) and t_2 ($n = 565$, $M = 3.47$, $SD = 0.61$).

Analysis Strategy

The data from this study is hierarchically structured, with students nested within classes. Multilevel modeling offers an appropriate framework to examine this complex data structure (Hox et al., 2017). In a first step, in order to verify the multilevel structure of the data, the classroom differences for all variables at the individual level were verified with analysis of variance and by calculating the intraclass correlation coefficients ICC(1) and ICC(2) with R package multilevel 2.6 (Bliese, 2016). While the ICC(1) represents the proportion of the total variance explained by the grouping structure, the ICC(2) shows the reliability of aggregated variables. Further, correlations between the study variables at the classroom level (e.g., teacher attitudes toward inclusion) and the individual level (e.g., student social behavior) were computed.

In a second step, multilevel structural equation modeling was performed using the R package lavaan 0.6–5 (Rosseel, 2012; Rosseel et al., 2019). Multilevel modeling enables the investigation of the extent to which the classroom differences (between-classroom variation) in social acceptance at t_2 were predicted by teacher attitudes toward inclusion and teacher classroom management. At the individual level (within-classroom variation), the extent to which student social behavior and social acceptance at t_1 were predictors of student social acceptance at t_2 was examined. In accordance with previous findings on sex-differences in social behavior, sex was added as a control variable at the individual level. Full information maximum likelihood estimation was employed to make use of all available data. The goodness of fit of the estimated models was evaluated using four indicators: chi-square

test, comparative fit index (CFI), root mean square error of approximation (RMSEA), and standardized root-mean-square residual (SRMR).

RESULTS

Intraclass Correlations

The analysis of variance showed significant differences between the classes for the variables at the individual level: cooperative behavior, prosocial behavior, and social acceptance (t_1 and t_2). The differences between the classes were significant for student social acceptance at t_1 ($F[33, 546] = 3.27, p < 0.001$) and at t_2 ($F[33, 531] = 4.55, p < 0.001$), as well as for student cooperative behavior ($F[33, 545] = 1.64, p < 0.05$) and prosocial behavior ($F[33, 545] = 1.99, p < 0.001$). The intraclass correlation coefficient ICC(1) values showed that 17.6% of total variance in social acceptance at t_2 and 11.7% of total variance in social acceptance at t_1 were explained by the classroom level. In contrast, only 3.6% of total variance of student cooperative behavior and 6% of total variance of student prosocial behavior were explained by the grouping structure, which is lower than the usual range ($ICC[1] > 0.10$ – 0.25) in educational studies (Hedges and Hedberg, 2007). Thus, in the multilevel structural equation modeling, only the student variables of social acceptance at t_1 and t_2 where aggregated at the classroom level. The ICC(2) values for social acceptance at t_1 (0.69) and t_2 (0.78) revealed a moderately good reliability of the group mean (Trevethan, 2017).

Further, the correlations between the variables on the individual level revealed a significant but small (Cohen, 1988) negative relationship between student sex and their social behavior (Table 1), which means girls were perceived as showing higher levels of social behavior than boys. In addition, student social behavior was moderately to strongly positively correlated with student social acceptance at t_1 and t_2 . On the classroom level, teachers' attitudes toward inclusion were positively but weakly correlated with teachers' time management and implementation of rules. Looking separately at each teacher attitude factor,

only behavior management and perceived ability to teach were positively, but weakly, correlated with teacher time management and with teacher implementation of rules.

The Role of Teacher Attitudes Toward Inclusion and Classroom Management in Student Social Acceptance

The hypothesized model with teacher attitudes toward inclusion as a manifest variable fitted the data well, $\chi^2(6) = 6.36, p = 0.384$, CFI = 1, RMSEA = 0.01 [90% CI: 0,0.06], SRMR = 0.02. The results are presented in Figure 2. On the individual level, student social behavior was correlated with student social acceptance at t_1 and was a predictor of student social acceptance at t_2 . Student sex was correlated with student social behavior. More specifically, girls were rated as having significantly higher levels of social behavior than boys. On the class level, classroom management was a significant predictor of student social acceptance at t_2 . As hypothesized, teacher attitudes toward inclusion did not predict student social acceptance at t_2 . In addition, teacher attitudes toward inclusion were not related to teacher classroom management, which was unexpected. On both levels, social acceptance at t_1 strongly predicted social acceptance at t_2 , which indicates a high stability of social acceptance over time.

An alternative model was tested with the three factors of teacher attitudes toward inclusion added separately as manifest variables. The adapted model also fitted the data well, $\chi^2(11) = 23.29, p < 0.05$, CFI = 0.99, RMSEA = 0.05 [90% CI: 0.02, 0.07], SRMR = 0.02. As expected, teacher attitudes about benefits of inclusion, about behavior management in inclusive classrooms, and about the ability to teach in inclusive classrooms had no effect on student social acceptance t_2 at the classroom level. In addition, none of the three factors of teacher attitudes toward inclusion predicted classroom management.

DISCUSSION

In this study, the impact of student social behavior, teachers' attitudes toward inclusion, and classroom management on

TABLE 1 | Correlations of student variables on individual level ($n = 580$) and teacher variables on classroom level ($n = 34$).

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1. Sex (male = 1)										
2. Social Acceptance t_1	−0.07									
3. Social Acceptance t_2	−0.05	0.74***								
4. Cooperative Behavior	−0.16***	0.58***	0.51***							
5. Prosocial Behavior	−0.15***	0.53***	0.47***	0.72***						
6. Attitudes	−0.01	0.08*	0.03	−0.03	0.004					
7. Benefits of Inclusion	−0.03	0.12**	0.07	−0.02	−0.03	0.81***				
8. Behavior Management	−0.03	0.08	0.02	0.01	0.06	0.84***	0.49***			
9. Ability to Teach	−0.01	−0.004	0.01	−0.04	−0.07	0.5***	0.18***	0.36***		
10. Time Management	0.04	0.09*	0.18***	−0.08	0.05	0.28***	0.06	0.36***	0.15**	
11. Implementation of Rules	−0.02	0.02	0.1*	−0.08	0.11*	0.28***	0.08	0.32***	0.1*	0.7***

* $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$.

Two-tailed. Variables 1–5 are student variables (individual level). Variables 6–11 are teacher attitudes and classroom management variables (classroom level).

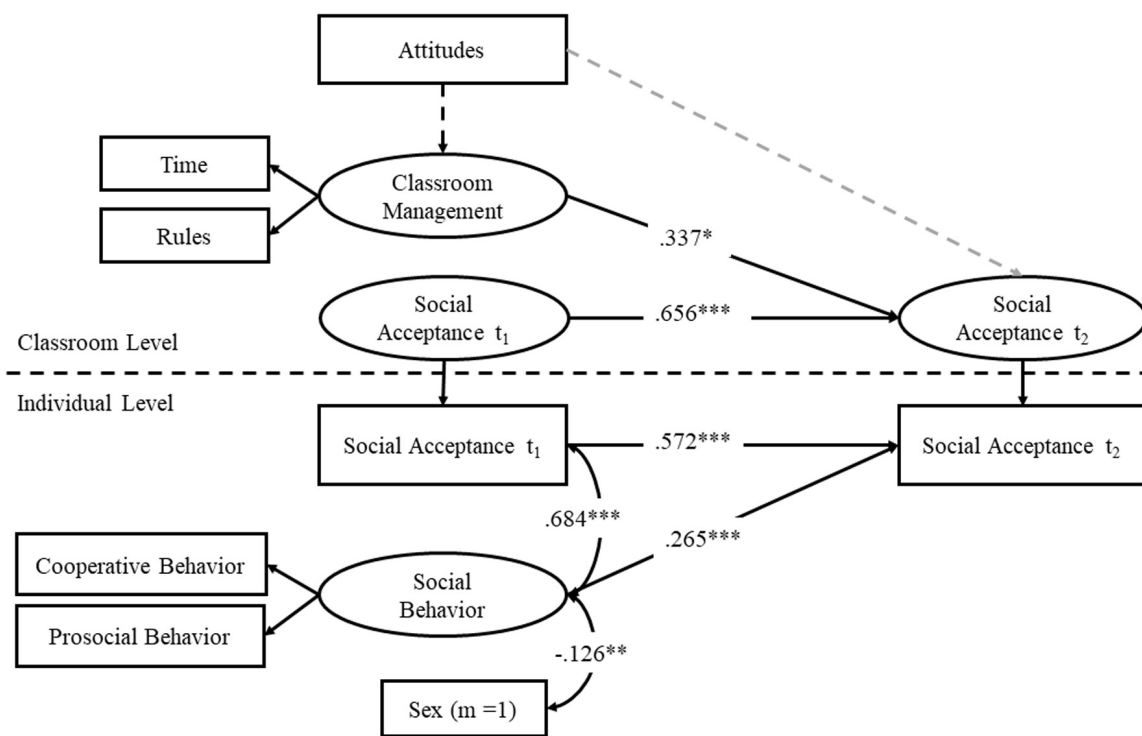


FIGURE 2 | Path diagram of the final model, containing all hypothesized paths and covariances. The dashed black arrow represents the hypothesized significant path between attitudes and classroom management that was not confirmed. The dashed gray arrow depicts the path between attitudes and social acceptance at t_2 that was hypothesized to be 0. Standardized estimates are provided with their respective level of significance (two-tailed). * $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$.

student social acceptance in inclusive classrooms was examined. Also, the extent to which teachers' attitudes toward inclusion as affect-motivation dispositions predict teachers' classroom management was investigated. This study contributes to a better understanding of the impact of teachers' attitudes toward inclusion and teachers' practices on student social experiences in the peer group. In addition, it includes both student and teacher predictors that contribute to the social acceptance of students on an individual and on a classroom level. Further, it adds value to earlier research by assessing classroom management with behavior observations in class.

Social acceptance in the peer group is an important aspect of social participation (Koster et al., 2009; Bossaert et al., 2013). Being accepted by peers can be crucial for the academic and socio-emotional development of students (Eriksson and Granlund, 2004). In inclusive classrooms however, some students are more at risk of having difficulties with their social participation than others. For instance, students with special educational needs are less accepted by peers than their classmates without special educational needs (Krull et al., 2014; Nepi et al., 2015). In order to be able to foster the social participation of all students in inclusive classrooms, the relevant factors on an individual and classroom level need to be identified.

In this study, the findings indicate that in inclusive classrooms students are more accepted by peers if they are perceived as displaying cooperative and prosocial behavior. Students with low levels of social behavior were less accepted by the peer group. This

is in line with previous research showing that children reject their peers because of their problematic social behavior (Bacete et al., 2017) and that a lack of socially competent behavior predicts peer rejection (Pedersen et al., 2007). Although students with special educational needs who show a lack of socially competent behavior are more likely to be rejected by their peers (Frederickson and Furnham, 2004; Odom et al., 2006), the results of this study suggest that students without special educational needs are also affected by the association between social behavior and social acceptance. Thus, creating opportunities for all students to acquire and practice cooperative and prosocial behaviors in the peer group (e.g., with peer assisted learning settings) is an important element in the facilitation of student social acceptance in inclusive classrooms (Garrote et al., 2017).

At the classroom level, effective teacher classroom management had, as predicted, a positive impact on the level of social acceptance in the classroom. While many studies have revealed the effect of classroom management on student academic outcomes (e.g., Hattie, 2009), this result supports the finding that student social outcomes are influenced by teachers' classroom management practices as well (e.g., Soodak and McCarthy, 2006). Further, it provides empirical evidence for the concept of the "invisible hand" that refers to the potential teachers have to unobtrusively influence the classroom social dynamics (Farmer et al., 2018). Whether intentionally or not, first to third grade teachers had an impact on the social acceptance level of the peer group through

their classroom management practices. Implementing clear and consistent rules, as well as successfully managing time, to avoid tardiness and unnecessary waiting, resulted in a higher level of social acceptance in the classroom by the end of the school year. It can be assumed that these classroom management routines prevented disruptive behavior (Kostewicz et al., 2008) and thus prevented a negative perception of students with disruptive behavior, which in turn affected the social acceptance level in the classroom. Finally, the results also highlight the importance of teachers' awareness of social dynamics in the classroom and of their unique position to support social experiences of students in the peer group with adequate classroom management practices (Farmer et al., 2019; Juvonen et al., 2019).

Teacher attitudes toward inclusion, as an affect-motivation disposition aspect of teacher competence, played no significant role in the social acceptance level in the classroom. This was expected as current research from regular classrooms shows that affect-motivation dispositions influence teaching practices and only indirectly affect student outcomes via teaching practices (Blömeke et al., 2015; Krauss et al., 2020). However, in this study, teachers' attitudes toward inclusion also did not predict teachers' classroom management practices. Therefore, teachers' attitudes toward inclusion had also no indirect effect—via teachers' classroom management—on student social acceptance. These study findings indicate that the attitudes of teachers toward inclusion might be less important than has been suggested by many cross-sectional studies (e.g., de Boer et al., 2012; Desombre et al., 2019; Hellmich et al., 2019) and that its impact on teaching practices is overestimated. Studies have found that teachers with more teaching experience in inclusive classrooms hold more positive attitudes toward inclusion (De Boer et al., 2011). This could indicate a stronger effect of teaching practices on teacher attitudes than vice versa. It could also be that teachers' attitudes toward inclusion are more important in preventing the exclusion of students with special educational needs from mainstream education and affect the willingness of teachers to include students with special educational needs in their mainstream classes (Malki and Einat, 2018). Further, as suggested by Savolainen et al. (2020), teachers' self-efficacy could be a more relevant predictor of teaching practices. However, looking at the factors of teacher attitudes separately, neither teachers' perception of their behavior management nor their perception of their ability to teach in inclusive classrooms, which should to some extent represent the behavioral dispositions of teachers, predicted their classroom management practices. These results support the finding of Hellmich et al. (2019) indicating no significant relationship between self-efficacy beliefs and self-reported teaching practices. However, the lack of significant effect in the present study could be due to the unidimensional assessment of attitudes toward inclusion with the ORI questionnaire (Ewing et al., 2018). Whereas the cognitive component of teachers' attitudes toward inclusion might not be represented in teachers' behavior, behavioral and affective components of teachers' attitudes toward inclusion are probably more strongly related to teacher behavior. In conclusion, the state of the research and the results show

that attitudes toward inclusion, and especially the assumptions on its effects, remain a “fuzzy concept.” In the end, positive attitudes toward inclusion might be, as reported by Bosse et al. (2016), a result of teachers' experiences of stress. In order to be able to draw any conclusions on the impact of teacher attitudes toward inclusion on teacher practices in class, further longitudinal studies using multidimensional assessment scales are clearly needed.

This study provides supporting evidence for the role teachers play in promoting social acceptance in inclusive classrooms. However, its findings need to be interpreted in light of its limitations. First, video-data were available from only one lesson. According to Praetorius et al. (2014), one videotaped lesson per class should be enough to analyze classroom management reliably. Nevertheless, teachers and students might have been influenced by being videotaped. In particular, the students might have displayed less disruptive behavior than in a setting without a video camera (Hawthorn-effect; Coombs and Smith, 2003). Second, classroom management of the teacher might be affected by the presence of the special education teacher in some of the classrooms as well as by the nested instruction (Jones and Brownell, 2014; Pfister et al., 2015). Third, the missing significant relationship between teachers' attitudes toward inclusion and their classroom management practices could be caused by the unidimensional assessment of teachers' attitudes. Recent studies strongly recommend considering not only the cognitive component, but also the affective and the behavioral (de Boer et al., 2012; Ewing et al., 2018). Fourth, the sequential assessment of the student social acceptance and the teachers' classroom management is only one element in favor of a causal relationship between these variables. Longitudinal studies using cross-lagged panel analyses with several measurement points are needed to support this causal claim (Selig and Little, 2012). Finally, the impact of the teacher related variables was studied for the whole class. The link between social behavior and social acceptance was not examined for students with special educational needs vs. students without special educational needs. The results may have differed if students with special educational needs were compared to their classmates. The small number of students with special educational needs per class made it difficult to examine this question. In addition, teachers' attitudes and behavior were assessed on a classroom level and not as they related to each individual student. Further studies investigating the effects of teacher related variables on an individual level and comparing their effects on students with and without special educational needs are needed to disentangle the impact of teacher attitudes and behavior on student social acceptance in inclusive classrooms.

To conclude, this longitudinal study confirms the significance of effective classroom management for student social acceptance (Soodak and McCarthy, 2006; Farmer et al., 2019). Teachers influence the social dynamics in the classroom by implementing their classroom routines. In order to use this influence to support student social acceptance, it is of utmost importance that teachers are aware of the positive or negative impact they have on social experiences of students

in the peer group (Farmer et al., 2019). Therefore, future studies should examine the impact of specific classroom management practices on student social experiences and learning about the effects of classroom management practices on student academic and social outcomes should be a mandatory component of teacher education. Further, considering the limitations of the present study, the impact of teachers' attitudes toward inclusion remains unclear. Interestingly, although the empirical evidence on the impact of teachers' attitudes toward inclusion is lacking, supporting student teachers in developing positive attitudes toward inclusion is still a major aim in the pre-service formation in some countries (e.g., Hellmich et al., 2016; Junker et al., 2020). This shows that more research is urgently needed to disentangle the relationship between the specific affect-motivation dispositions in terms of inclusion and the concrete teaching practices in inclusive classrooms.

DATA AVAILABILITY STATEMENT

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

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ETHICS STATEMENT

The studies involving human participants were reviewed and approved by University of Zurich Ethics Commission. Written informed consent to participate in this study was provided by the participants' legal guardian/next of kin.

AUTHOR CONTRIBUTIONS

AG, EMO, FF, and RSD conceptualized the research. AG performed the statistical analyses, wrote the first draft, and finalized the manuscript. EMO contributed to the first draft, supervised the analyses, revised and substantially helped to finalize the manuscript. All authors organized and conducted the data collection and approved the submitted version.

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Conflict of Interest: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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